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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/348,165	07/07/1999	AKIRA NAKAGAWA	826.1553/JDH	4844

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WASHINGTON, DC 20005

EXAMINER
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WONG, ALLEN C

ART UNIT	PAPER NUMBER
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2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

09/348,165

Applicant(s)

NAKAGAWA ET AL.

Examiner

Allen Wong

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 5 and 11-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 26 is/are allowed.
- 6) ☒ Claim(s) 11-22, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/28/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 11-22, 24 and 25 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagasaki (5,428,396) in view of Kovalev (6,339,616).

Regarding claim 11, Yagasaki discloses a motion vector decoding device for decoding an encoding result which is obtained by encoding motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising:

predicting means for predicting a motion vector of a target block based on motion vectors of a plurality of blocks adjacent to the target block (see figs.1A and 1B, note the motion vector is predicted based on the target block or objective block surrounded by the plurality of adjacent blocks to the targeted or objective block within the same frame; also, see col.18, ln.1-13, the prediction is based on the strong spatial correlation of the motion vector values for adjacent blocks within a frame);

determining means for determining accuracy of a prediction made by said predicting means based on degrees of non-uniformity of the plurality of motion vectors

(col.18, ln.1-13 and col.19, ln.11-63, note the table 5 discloses a plurality of VLC codes in that each VLC code has two values of motion vectors assigned to each VLC code, so clearly, there are non-uniform motion vector values); and

decoding means for decoding the motion vector of the target block by using a result of the prediction made by said predicting means with a decoding method determined based on a result of the determination made by said determining means (col.19, ln.43-63 and col.19, ln.63 to col.20, ln.6; since there are VLC codes to code the motion vector data, clearly, Yagasaki discloses the decoding means and process to decode these VLC codes).

Yagasaki does not specifically disclose the use of two different decoding methods that use different codes to decode the same motion vector. However, Kovalev teaches that the use of two different decoding methods that use different codes to decode the same motion vector (col.15, ln.15-36 and fig.8, Kovalev discloses the use of element 804 that can implement at least two decoding methods at elements 806, 808 and 810 to decode the same motion vector as encoded by the corresponding fig.7). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yagasaki and Kovalev, as a whole, for accurately, efficiently encode and decode image data while maintaining high image quality (Kovalev col.4, ln.23-27).

Note claims 12-13 and claims 20-22 have similar corresponding elements. Also, note dependent claims 14-19 are rejected for the same reasons as set forth above for independent claims 11-13.

Regarding claims 24-25, Yagasaki discloses a motion vector decoding device method for decoding a result of encoding by partitioning each frame of moving image data, comprising:

determining a motion vector based on motion vectors of a plurality of blocks adjacent to a target block (see figs.1A and 1B, note the motion vector is predicted based on the target block or objective block surrounded by the plurality of adjacent blocks to the targeted or objective block within the same frame; also, see col.18, ln.1-13, the prediction is based on the strong spatial correlation of the motion vector values for adjacent blocks within a frame); and

decoding a motion vector of the target block (col.19, ln.43-63 and col.19, ln.63 to col.20, ln.6; since there are VLC codes to code the motion vector data, clearly, Yagasaki discloses the decoding means and process to decode these VLC codes).

Yagasaki does not specifically disclose the use of a plurality of different decoding methods that use different codes to decode the same motion vector. However, Kovalev teaches that the use of two different decoding methods that use different codes to decode the same motion vector (col.15, ln.15-36 and fig.8, Kovalev discloses the use of element 804 that can implement at least two decoding methods at elements 806, 808 and 810 to decode the same motion vector as encoded by the corresponding fig.7). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yagasaki and Kovalev, as a whole, for accurately, efficiently encode and decode image data while maintaining high image quality (Kovalev col.4, ln.23-27).

***Allowable Subject Matter***

1. Claims 5 and 26 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter: the applicant has rewritten claim 5 into an independent form such that the current claim 5 incorporates the previous limitations of the claim 1. Since there are no prior art references that teach or suggest the combination of limitations as disclosed in the current claim 5, it is considered patentable.
3. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not specifically disclose the limitation of wherein the motion vectors comprise first, second and third motion vectors said determining comprises: determining a first absolute value of difference between the first and second motion vectors, determining a second absolute value of difference between the second and third motion vectors, and determining a third absolute value of difference between the first and third motion vectors; comparing the first absolute value to the threshold, comparing the second absolute value to the threshold and comparing the third absolute value to the threshold; and indicating that the prediction is not accurate when any of the first, second and third absolute values are greater than the threshold.

Claim 26 is patentable because claim 26 combines the limitations of claim 22 and 23 as a whole.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

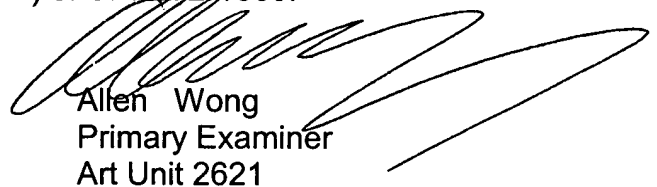
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Groody can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Allen Wong  
Primary Examiner  
Art Unit 2621

AW  
3/12/07